

EXHIBIT F

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IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF NORTH CAROLINA
CHARLOTTE DIVISION

Case No. 3:18-cv-00197-RJC-DSC

BRUCE RHYNE and JANICE RHYNE,)
Plaintiffs,)
vs.)
UNITED STATES STEEL CORPORATION,)
et al.,)
Defendants.)

DEPOSITION OF ROBERT F. HERRICK,
Sc.D., CIH, FAIHA, called as a witness by and on
behalf of the Defendants, Chevron U.S.A., Inc., CRC
Industries, Inc., and Univar Solutions USA Inc.,
f/k/a Univar USA Inc., pursuant to the applicable
provisions of the Federal Rules of Civil Procedure,
before P. Jodi Ohnemus, RPR, RMR, CRR, CA-CSR
#13192, NH-LSR #91, MA-CSR #123193, and Notary
Public, within and for the Commonwealth of
Massachusetts, at Veritext Legal Solutions, 101
Arch Street, Suite 650, Boston, Massachusetts, on
Wednesday, November 6, 2019, commencing at 9:09
a.m.

1 manufactured by Magnaflux Corporation?

2 MR. DuPONT: Form.

3 A. No, I don't -- oh, well, sure -- sure I
4 do, 'cause here it is. It's -- I mean, it does
5 mention Magnaflux in the Approved Chemical List.

6 So yeah, I do see that.

7 Q. Do you understand that Magnaflux
8 Corporation is not a named defendant in the case?

9 A. Oh, no, I guess they're not.

10 Q. Did Mr. Rhyme have benzene exposures from
11 daily living every day of his life before he was
12 diagnosed with AML -- separate and apart from any
13 exposures that he had to benzene from the products
14 that you talk about in Tables 3 and 4?

15 MR. DuPONT: Form.

16 A. Okay. So you're referring to, say,
17 nonoccupational exposures?

18 Q. Well, I think your report talks about
19 nonoccupational exposure to certain products.

20 So I'm talking about did he have -- or I'm
21 asking about whether he had benzene exposures from
22 daily living, separate and apart from any benzene
23 to which he was exposed from the products on Tables
24 3 and 4?

25 MR. DuPONT: Form.

1 A. Yeah, I mean, he probably had the same
2 kind of exposures that, you know, most of us have.
3 There's benzene levels in ambient air -- varied,
4 you know, quite a lot, depending on where you live.

5 He -- I don't remember if this came up,
6 but he very likely pumped his own gas at the gas
7 station and filled his car. So, you know, he had
8 that source.

9 He wasn't a smoker, so, you know, I think
10 that's -- that's, you know, sort of, off the table.
11 That's always, you know, something to consider.

12 And I don't know that he, you know, I
13 don't remember from the record if he lived with
14 anyone who smoked. I just don't remember that
15 part.

16 Q. Did you in your report estimate his daily
17 exposure to benzene, separate and apart from what
18 you believe he was exposed to from the products in
19 this case?

20 A. No, I didn't.

21 Q. Did you in your report calculate his
22 cumulative exposure to benzene from daily living in
23 the nearly 60 years before he was diagnosed with
24 AML, separate and apart from benzene to which he
25 was exposed to the products that you list in Tables

1 3 and 4?

2 A. No, I didn't.

3 Q. Why didn't you do any calculations to
4 assess his exposure to benzene -- either on a daily
5 basis or a cumulative basis -- from daily living?

6 A. Well, I think it was -- it was partly as I
7 was trying to be responsive to the -- you know, the
8 question that was put to me, you know, in -- in
9 engaging me as an expert here, was around his
10 occupational exposure.

11 So that's why I restricted it to that.

12 Q. You understand that before you were
13 retained in this matter as an expert on behalf of
14 the plaintiffs that the plaintiffs had retained
15 Stephen Petty?

16 A. Right, I do.

17 Q. Okay. You understand that he served in
18 the same role that you're now serving?

19 A. I do, yeah.

20 Q. How did you learn that the plaintiffs had
21 previously retained Mr. Petty?

22 A. Well, that's when -- when Mr. DuPont sent
23 me a copy of Petty's report.

24 Q. Were you told why Mr. Petty was no longer
25 serving as an expert for the plaintiffs in this

1 academic articles and the materials you actually
2 produced, is it fair to say all these materials
3 came from Mr. DuPont's office?

4 A. I think that is fair to say, yeah.

5 Q. So you haven't reviewed anything from any
6 outside sources other than these academic studies
7 that you've studied?

8 A. On -- on this product, you mean, the
9 particular --

10 Q. Yes, sir.

11 A. No, that's -- that's pretty much the
12 extent of it.

13 Q. Okay. And, again, not having had the
14 prior testimony when you did your assessment, is it
15 fair to say that you made some assumptions and --
16 and looked at some more general information, as
17 opposed to specific testing of the Kroil Oil
18 product?

19 MR. DuPONT: Object to form.

20 A. Yeah, as of the time that I wrote it, I
21 really didn't have specific testing results from
22 this product, and what I, you know, wound up using
23 was largely this information from the 2005 Material
24 Safety Data Sheet.

25 Q. Okay. And then assessed that in the

1 context of -- I think you've referenced the 2008
2 Williams study; correct?

3 A. Where she talked -- yes, where she talked
4 about the range of benzene in various products.

5 Q. Is it fair to say that's a more general
6 assessment, as opposed to a specific assessment of
7 data on this product?

8 MR. DuPONT: Object to form.

9 A. You mean her overall --

10 Q. Yes.

11 A. -- approach?

12 Yeah, I mean, she was looking at the whole
13 family of petroleum-based products.

14 Q. Okay. And that encompasses a wide range
15 of products with wildly varying compositions and
16 ingredient lists and things of that nature;
17 correct?

18 MR. DuPONT: Compound. Form.

19 A. True, yeah, although I will say, you know,
20 she -- she organized it in a way that you can, you
21 know, see specific characteristics. But, yeah,
22 it's -- it's a very wide-ranging survey.

23 Q. Okay. And, again, I'm trying to
24 streamline things. I know we've all been here
25 longer than we thought we would, but the -- your

1 report suggests that you're assessing Mr. Rhyne's
2 use of this product sometime between the early
3 1990s and 1998; correct?

4 A. That's right, yeah.

5 Q. Okay. And, then, again, just to
6 streamline and clarify: This is the only time
7 period that you've evaluated his use of the Kroil
8 product.

9 A. It is, that's right.

10 Q. Okay. Do you know what form he used this
11 product in?

12 MR. DuPONT: Form.

13 A. You're thinking of, like, as a liquid or
14 an aerosol?

15 Q. Liquid, aerosol, or gel or what -- what --

16 A. My -- I'm trying to recall how that was
17 discussed. I think it was a liquid that he used as
18 -- as a penetrant.

19 Q. Okay. That's a fairly significant aspect
20 of the analysis; right?

21 A. Well, it would be, although, you know,
22 most of the information that's out there around
23 these cross-penetrant materials, you know, does
24 tend to be on the liquids.

25 Q. Okay. Well, I mean -- and, again, I'm

1 know, over the course of the workday. I didn't
2 have any -- any more detailed information about how
3 many times per hour he applied it, or if he applied
4 it once and then it sat on -- on the counter, you
5 know, for the rest of the time.

6 Q. And, I guess, how do you understand how to
7 make the approximations you made in using the --
8 the computer system simulator that you used and the
9 program that you used to calculate these exposures
10 without knowing that?

11 MR. DuPONT: Form.

12 A. Well, you know, in this case I didn't
13 really use, you know, any of the modeling for --
14 for this. I used this value that -- these values
15 -- this range that I talked about that I derive
16 from the Williams data.

17 So I took that as the exposure that was
18 prevalent throughout that 10-hour work period.

19 Q. Okay. So you didn't use any of the
20 computer modeling in your assessment of Kroil.

21 A. I did not, no.

22 Q. Okay. All right. And we'll talk about
23 more in a minute how that was done.

24 What understanding do you have about this
25 work he was doing -- what -- what's your

1 take a look back, you know, in his deposition,
2 'cause, as I say, somehow I have it in my mind that
3 he -- he seemed to, I think, say the reassembly
4 took about a third of the time of the disassembly.

5 Q. And in your defense, I think he only
6 talked about it for about six pages. So it's --
7 the fact that you recall as much as you do is to
8 your credit. I appreciate that.

9 All right. So let's -- I think that
10 clarifies a lot of what I wanted to talk with you
11 about in terms of his actual work.

12 Let's -- let's talk about how you arrived
13 at these figures. So how does -- how does the
14 process start when you were evaluating this daily
15 exposure and cumulative exposure?

16 Kind of -- kind of walk me through that.

17 A. Well, in the -- in this particular case --

18 Q. Right, and as it relates to Kroil, sure.

19 I'm sorry. I didn't ask a very good
20 question.

21 A. Well, it kind of starts with trying to see
22 what I can learn about the composition of the
23 products that he was, you know, running into when
24 he used Kroil. And so that leads me back to the
25 safety data sheet in this case, as I didn't have,

1 you know, any of the other information that we just
2 talked about earlier.

3 So there, you know, you can -- and in this
4 case, based on the content of the materials that he
5 was using from the safety data sheet, I went back
6 and -- and, you know, used the information from the
7 published literature, in particular that Williams
8 paper that we've talked about about what levels of
9 exposure were associated with products that were in
10 use, say, from about -- I think she spoke from
11 about the '70s to 2000, over that time period --
12 what was the range of benzene content of those
13 products.

14 And so that's how I matched up and said,
15 okay, well, for the range that I'm going to use for
16 him, is -- we'll say it's somewhere between 100 --
17 let me just make sure I give you the right values
18 here -- (witness reviews document) -- that the
19 range over those years was from 100 to 2,000 parts
20 per million; and the one-hour average -- average
21 exposures that were associated with that ranged
22 from .01 to 1 parts per million. And -- and that's
23 -- and so the midrange of that is .5.

24 Q. Okay.

25 A. So that's how that number comes to be.

1 Q. And those -- those are figures you derived
2 from looking at the listing of items in the
3 Material Safety Data Sheet --

4 MR. DuPONT: Objection --

5 Q. -- and then assessing that prior study.

6 MR. DuPONT: Objection to form.

7 A. Right, I mean, 'cause we knew the
8 ingredients that were present, at least in -- as of
9 2005 -- that were present in Kroil.

10 Q. So, I mean, not to oversimplify things,
11 but tell me, what is the Material Safety Data
12 Sheet?

13 A. Oh, well, it's a document that's produced
14 really in compliance with the hazard communication
15 standard, and so the manufacturers, industry
16 readers, you know, use this as a means of
17 communicating information to the people who use the
18 product.

19 Q. All right. And what is typically
20 contained on the Material Safety Data Sheet?

21 A. Well, that's a good question, because, you
22 know, over the years and -- and between companies,
23 it varies all over the place. And I've seen some
24 that, you know, look like they were written by the
25 corporate toxicologist, because they've got, you

1 A. Right.

2 Q. And conversely if you use the values on
3 the high end of the spectrum, then the -- the daily
4 and cumulative totals will be elevated.

5 A. Correct. Yeah.

6 Q. All right. If I used 10 parts per million
7 versus 100 parts per million, the -- the exposure
8 will be less by a factor of 10; right?

9 MR. DuPONT: Form.

10 A. Yeah, that's -- that's a --

11 Q. That's just simple math at that point.

12 A. -- an approximation. Yeah. Sure. Right.

13 Q. Okay. So how do we get the daily exposure
14 figures -- or the new figures, I guess?

15 We might only have one of these, so we
16 might have to share.

17 A. Though the daily didn't change, but what
18 changed was the cumulative.

19 Q. I'm sorry. Cumulative. Yes, sir. My
20 apologies.

21 A. So what I did was I adjusted his duration
22 values so that instead of using that whole
23 seven-year period as his period of exposure, I -- I
24 downsized that. It was, I think, by a factor to
25 make it about five percent of his time during that

1 seven-year period when he was actually exposed.

2 So the calculation that would be on the
3 spreadsheet is the product of his daily average
4 times the years. And so instead of seven years,
5 it's, I think, about .035 years.

6 Q. Okay. And so that's reflected here in
7 Exhibit 12.

8 A. That's the -- yeah, that's the result of
9 doing that calculation with the correct duration
10 value.

11 Q. And the revised assessments you had for
12 Kroil is -- I'm sorry. There's a mark there.

13 Is that 10.02 or .02?

14 A. Sorry. That -- I probably should have
15 done -- that's just meant to divide that cell into
16 two parts.

17 Q. Okay. Okay.

18 A. So it's 0.02.

19 Q. Okay. So that's the cumulative exposure
20 and the midpoint of the cumulative exposure in
21 ppm-years.

22 A. That's right.

23 Q. All right. And, then, so that comes from
24 a range of .004 to .04 for the cumulative range;
25 correct?

1 A. That's correct, yeah.

2 Q. All right. And are there any other
3 changes to the totals -- well, explain to me on the
4 bottom here under "Total." Why are there three
5 separate calculations?

6 A. Oh, what I tried to do was capture -- you
7 know, if you think about the kind of range of
8 scenarios that he had, you know, and -- and the
9 things that were, you know, his major uses -- the
10 Liquid Wrench, he had three different benzene
11 concentrations in Liquid Wrench; and then, in the
12 CRC products, I, you know, calculated it for two
13 different levels of benzene.

14 And so what I tried to, kind of, collapse
15 overall here is as low, medium, and high, would be
16 -- low would be at the lowest benzene in Liquid
17 Wrench and the lowest benzene in CRC --

18 Q. Okay.

19 A. -- and net high is the high and the high.

20 Q. Okay. So those adjustments, as well as
21 the adjustment for the Kroil are the only changes
22 from Table 4 contained in your report; correct?

23 MR. DuPONT: He didn't adjust the Liquid
24 Wrench numbers. He just adjusted what the total --
25 by reducing the Kroil numbers.

1 A. Right, the only, like, change is that
2 Kroil value.

3 Q. All right. Doctor, I apologize if I asked
4 you this already: Have any of your cases in which
5 you worked as an expert witness or consultant been
6 in North Carolina or South Carolina?

7 A. Let's see. There was one, and it never
8 really actually went to trial, because they
9 abandoned it, I think, but it was a South Carolina
10 case where the issue was trying to get someone
11 Workers' Compensation.

12 Q. Okay.

13 A. And I was involved in some of the early
14 background work and report-writing on that. But I
15 -- I think that wound up being settled before it
16 ever even got to the point of a report.

17 Q. You didn't give a deposition or testimony
18 in a hearing?

19 A. No, it never went very far.

20 MR. JEFFRIES: All right. Doctor, I think
21 I will pass the baton so that we can wrap this up.
22 I appreciate your time. Thank you.

23 THE WITNESS: Thank you.

24 EXAMINATION

25 BY MR. BENDER: